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INTRODUCTION*

The role of the emotions is much neglected in legal theory. This should be puzzling at first sight, because emotions play an important role in many areas of the law. Consider the following problems.

A person who kills while angry is usually guilty of a less serious crime than a person who kills in a calm, unemotional state, but not if the anger is caused by hatred rather than shame.

Judges exclude photographs of gory crime scenes, even when the photographs have probative value, when the photographs are likely to provoke extreme outrage or disgust. The use of victim impact statements in capital sentencing has been criticized for inflaming the jury against the defendant and defended as a way of enhancing the jury's empathy for the victim.

A common justification for workplace, environmental, and consumer product regulation is that individuals lack information about the risks that they face. Unexplored is the role that fear plays in decisions to fly on airplanes or use air bags, and how agencies should regulate in response to panics about health risks.

Mediators have long known that anger and other emotions interfere with bargaining, but these emotions are overlooked in contract theory. Emotional response to breach of contract has important implications for the design of remedies in contract law.

Market behavior and responses to cost-benefit surveys often reflect emotional responses that people disclaim when they are calm. Should this information likewise be discounted by agencies engaging in cost-benefit analysis, or should it be treated as authentic data on actual preferences?

These issues raise questions about the relationship between emotion and law, but legal theory is unprepared to answer them. One reason for the neglect of emotions in legal theory may be that the dominant strains

*Sources for quotations, arguments, and empirical data discussed in this paper can be found in the working paper cited on the title page.

of normative legal theory — economic analysis, moral-philosophical analysis, constitutional analysis — rely on methodologies that are not well suited to analyzing emotion, or at least, for reasons of intellectual history, have simply not yet focused on the emotions. Another reason may be the primitive state of the psychology literature on the topic. Psychologists themselves admit that they do not have a good theory of the emotions, in part because research in this area is relatively new. Yet a review of that literature reveals a number of insights that are sufficiently well-developed to be of value for legal theory. And, indeed, in the past few year the emotions have begun to interest a small but growing group of legal theorists.

This paper contributes to this small literature by providing a simple but useful framework for analyzing the relationship between law and the emotions. The theory draws on the economic model of consumer choice, but it does not reduce emotional behavior to rational self-interest, and instead relaxes the consumer choice model in order to account for emotional behavior. The framework assumes that people's "calm" preferences, that is, the preferences that they have when they are not emotionally aroused, differ from their "emotion state" preferences, which are skewed toward the stimulus that provokes the emotion. Further, people's abilities and beliefs about the world often differ in emotion states and calm states. Finally, because people can anticipate their emotional responses to various conditions, they will often take steps earlier on either to avoid (or to pursue) these conditions, and to cultivate certain beneficial emotional dispositions.

The framework does simplify, but it is not simplistic, and it sheds light on the debates discussed above. Its predictions are fairly straightforward; the main contribution is clarifying the relationship between emotions and rational action by placing them in the rational choice framework which is now the standard approach to analyzing private law and some aspects of public law. After discussing the psychology literature (Part I), and laying out the framework (Part II), I analyze emotions

as excuses in criminal and tort law (Part III), regulation of emotion-laden risks (Part IV), and bargaining in contract law when parties are emotional (Part V).

I. The Emotions

Although psychology lacks a widely accepted theory of emotion, and many fundamental issues about the nature of emotion remain unresolved, much progress has been made in the last thirty years, and agreement on some important issues has been achieved. An emotion is one of a group of psychological phenomena with the following distinctive characteristics. Emotions are usually stimulated by the world, either via the mediation of cognition or through a more primitive stimulus-response-like neurological mechanism. They have a certain feel or affect characterized usually by a focus on a particular stimulus with the result that the rest of the environment "fades" (a little or a lot, depending on the strength of the emotion) though does not disappear altogether. An angry person feels a kind of warmth and agitation; it is directed usually at another person, the result of a slight or offense. A person who is disgusted feels a kind of nausea; it is directed at the object that provokes the disgust. The rest of the world remains, but at a remove: an angry person might restrain himself because he does not want to be arrested for assault; a disgusted person might overcome the urge to withdraw because he wants to help a person with a disgusting wound or he knows that the disgusting substance is an important medicine. Although emotions are usually accompanied by physiological changes, there does not appear to be a one-to-one correspondence between the different emotions and physiological states: emotion has an irreducibly mental component.

One useful approach to understanding the emotions is to think about them against the background of the theory of consumer choice. In doing so, I follow cognitive psychology, which got its start by criticizing expected utility theory, and, I think, the mainstream literature on the psychology of the emotions, which appears to understand emotion against an implicit theory of rational behavior.

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I. The Emotions

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It is immediately clear that emotions are troublesome for the rational choice starting point that people choose actions in a way that is consistent with their preferences. It is common to think of emotions as "outside" forces that compel one to act inconsistently with the interests of the self. This conception is familiar from everyday excuses for offensive conduct. A person might apologize for insulting someone else by explaining that he was "angry," or "depressed," or "irritable." The implication is always that the speaker is not fully responsible for his actions, because he was taken over by his emotions. But this conception is wrong. We hold people responsible for their emotions. If anger was justified by some earlier wrong committed against the agent, then anger may be an excuse; if it resulted from an innocent mistake, then the anger is no excuse. Whether or not a person's emotional state excuses his conduct depends on whether the person could have avoided the emotion or avoided the stimulus that provoked the emotion, and whether the emotion reflects acceptable moral beliefs about others and the world.

A better way to think about emotions is to start by noting that a person's preferences might have different emotional valences. X has a preference that Y not be around. The preference could be more or less intense, and let us fix the intensity by supposing that X is willing to pay $100 to avoid encountering Y. Economic analysis usually stops this point, and takes this number as given. But it may also be relevant that X's preferences has an emotional coloring. X's emotions toward Y are qualitatively distinct, and this difference cannot be reduced to a dollar amount. X might hate Y, be angry at Y, or be disgusted with Y – while in all cases having the same monetized preference to avoid Y.

Do these distinctions matter? In some cases the reduction of emotionally colored desires for certain world states to a monetized preference ordering is unobjectionable. If we are simply concerned with deterring certain behavior, and if the emotionality of the desire does not result in an idiosyncratic influence on decision-making, knowledge of an affected person's costs

and gains is sufficient for determining policy. For example, the law need not make distinctions on the basis of a tortfeasor's emotional state if its only purpose is to ensure that the victim is compensated for his injury. Angry and calm drivers are sufficiently deterred if they must pay the social cost of their behavior. But in some contexts the emotional coloring of a preference does have instrumental and normative consequences.

From an instrumental perspective, the effectiveness of different kinds of sanctions often depends on a person's emotion state. An angry person discounts future sanctions but may be quite sensitive to claims about the provocation. If you push into a person, you are more likely to avoid being punched in the nose if you tell him that you tripped than if you remind him that he could go to jail for assault. Anger is also vulnerable to delaying tactics and cooling off periods. Hatred, by contrast, is a more constant emotion, and also less likely to be extinguished by a reasonable explanation. Further, we expect irascible people to avoid places where their anger is likely to be provoked, just as we expect epileptics to avoid driving. Fear, disgust, and the other emotions all have their different idiosyncrasies, and a well-designed legal system exploits them differently.

From a normative perspective, the bare fact that a person has acted under the influence of emotion does not excuse his conduct. In fact, while some emotions mitigate guilt, others enhance guilt. Anger provoked by betrayal still mitigates guilt; but anger provoked by unacceptable moral beliefs may increase guilt. Hate rarely excuses murder, but real fear, even if not fully justified, might mitigate culpability.

Both of these observations assume that people remain rational while under the influence of emotion; emotion is rarely, if ever, merely a reflex to some external stimulus. An angry, disgusted, fearful, or sad person usually can deliberate about his behavior and does not (with the possible exception of certain kinds of fear) engage in reflexive action. This suggests that people continue to act rationally while in an emotion state, even though they act differently from the way they do

in the calm state. One can capture this point by positing that during the emotion state, people experience usually temporary variations in their preferences, abilities, and/or beliefs.

Their preferences change so that what psychologists call the "action tendency" of an emotion becomes relatively attractive. The action tendency of anger is to strike out; so we can say that a person, while angry, develops a temporary preference to strike the person who offends him. The action tendency of disgust is to withdraw; a person, while disgusted, develops a temporary preference to withdraw from the disgusting object. Grief produces withdrawal from other people and preoccupation with the lost person or thing; fear produces flight from a threat; pity produces aid. But before and usually after the emotion state, the person's preferences are constant (the "calm preferences"), so he might disapprove of what he expects to do, or did, in the emotion state. It is this inconsistency over time that makes emotional behavior seem irrational; but it is important to see that a person in an emotion state does not act irrationally given his temporary preferences.

Abilities may also change in the grip of an emotion. When the emotion state occurs, the agent may find himself more alert and vigorous, even stronger, or simply less reliant on slow-moving deliberation. The angry person is aroused: he feels less pain, tires less quickly, responds more rapidly to movement. The anxious or fearful person becomes more alert to the environment, and flees quickly from danger. A grief-stricken person may experience a decline in abilities: everything becomes more difficult to do. Evidence of physiological changes – hormonal changes, increase in the heart rate, and so forth – supports the view that abilities change during some emotion states.

Finally, beliefs may change during emotion states. An angry person overestimates the probability that the offender will attack him, or that the provocation was not an accident but the result of intent to harm or humiliate. A fearful person overestimates the probability of harm associated with the threat that causes his fear.

Joyful people underestimate risks of harm, pessimistic people overestimate the same risks.

My claim, then, is that during the emotion state, a person acts rationally, that is, internally consistently, given the new and usually temporary preferences, abilities, and beliefs that he has in that emotion state. The actions taken during the emotion state will, of course, affect the agent's endowments, and this may have consequences for his behavior after the emotion state is over; but aside from that I assume that preferences, abilities, and emotions during the calm state are the same before and after the emotion state.

My final point is that agents anticipate their emotion states, and take actions in anticipation of them. This brings us to the matter of character. "Emotional disposition" refers to a person's tendency to feel an emotion, which itself is no doubt connected to genetic, cultural, and educational factors. An irascible person is more likely to become angry; a fearful person is more likely to become scared. People usually know their own emotional dispositions and can take steps to modify them or to avoid conditions that activate them. Suppose, for example, that a person knows that if he goes to a rowdy bar, he may be insulted, and further he knows that he is irascible. Upon being insulted, he might strike the person who insults him. To avoid this, he can (1) knowing about his emotional disposition avoid the bar, or (2) earlier on try to overcome his irascibility through meditation (or whatever).

These actions are those of a rational person who has self-knowledge, including knowledge about his emotional disposition. Not all people know everything about their emotional dispositions, but enough people do enough of the time that we recognize that people ought to act with attention to their emotional dispositions and blame them if they do not. Indeed, I will argue below that the criminal law does just this. More generally, law cares about emotions because (1) a person responds to incentives differently while in calm states and while in emotion states, and across emotion states, and (2) a person may have some power to change his or her emotional

disposition or to avoid stimuli that provoke certain emotion states that increase the likelihood of harm to others.

II. A Framework for Analyzing Law and the Emotions

A. *Assumptions*

The model of consumer choice assumes that individuals have preferences in the sense that they are able to rank the various states of the world that will result from their choices. These preferences are consistent, transitive, and complete. A utility function maps the states of the world to a number, so that we say that an individual's utility rises as he obtains increasingly preferred states of the world. Individuals have certain abilities, which enable them to engage in a particular action at greater or less cost; and they have budgets that limit the amount of resources that they can spend in satisfying their preferences.

Economists usually assume that preferences remain stable over the period of time relevant to analysis. If individuals switch from labor to leisure after an increase of the tax on their income, the usual explanation is that the opportunity cost of leisure declines, not that the tax increase happened to coincide with an exogenously caused change in preferences, though of course the latter is possible as a theoretical matter. The reason for this convention is that economics has nothing to say about how preferences change; so any economic, as opposed to psychological, explanation for behavior must look to other factors.

I depart from this model, though I hew as closely as possible. I assume that under certain conditions a "stimulus" will produce an "emotion state," during which certain otherwise fixed attributes of the agent change. These attributes then return to what they were before the emotion state occurred. The attribute on which I will focus is the preference. During the emotion state, preferences reflect a higher ranking of world states that are relevant to the emotion, or, as I will sometimes say, the emotion-relevant good will become more

intensely preferred. In addition, abilities may change during the emotion state: the agent may become more or less able to convert inputs, like time and energy, into outputs like labor or attack. And beliefs may change during the emotion state: the emotion may cause the agent to believe that an emotion-relevant probability is higher than the probabilities he attaches to it during the calm state (sometimes, the emotion-relevant probability may be more accurate).

"Stimulus" refers to the whole set of environmental or interpersonal conditions that, whether via cognitive interpretation or not, set off an emotional reaction. An insult coming from a stranger could stimulate anger, or merely seeing someone who has offended the agent in the past. The observation of sewage or rotting meat could stimulate disgust. Receipt of an award might stimulate pride or happiness. Learning about a rival's success stimulates envy. Observation of a child's misery might stimulate compassion or pity. In each case, some aspect of the environment acts as a stimulus of the emotional reaction. As should be clear from these examples, emotional reaction to a stimulus is not necessarily, or even usually, a reflex action but often involves an appraisal of surrounding conditions, and all the cognitive work that this term implies.

Our final assumption is that people can cultivate their emotions. People are self-conscious and generally (though not always) knowledgeable about their emotional dispositions, recognize when these emotional dispositions lead them astray, and take steps to modify them. The idea of cultivating (benign) emotions or even emotionless calm is similar to the simpler act of avoiding stimuli of destructive emotions. A person might seek to control his anger or envy through meditation, yoga, religious pursuits, and so forth; or by avoidance: he might stop going to bars where people slight him; he might move away from cities or neighborhoods where conspicuous consumption is the norm; he might avoid homeless people. In these cases, the person avoids stimuli of anger, envy, or pity that might get him trouble or simply be unpleasant to experience. Cultivation of

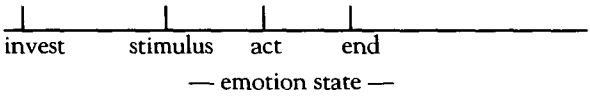
emotional dispositions and simple avoidance are, of course, very different behaviors, but they can be usefully treated as the same for purpose of analysis.

Students of the emotions will notice that the framework is better suited to some emotions (fear, disgust, anger) than others, such as love and jealousy. The "higher emotions" are more complex, have great cognitive content, have less distinct physiological manifestations, are less uniform across cultures, have fewer obvious correlates in animals, and are – to get to the point – more poorly understood by psychologists. Fortunately, they also seem to play a smaller role in the law, and I will, for the most part, avoid them.

B. *Order of Actions*

Our simple model of the emotions assumes a stylized order of events, represented by the timeline in Figure 1:

Figure 1



The first event is the agent's investment in either cultivating an emotional disposition orvoiding conditions that will stimulate the emotion. The second event is the application of the stimulus that provokes an emotion.

Next comes the emotion state. This refers to the actual occurrence of the emotion. It may last for an instant or for a very long time. For example, the agent might be angered when someone pushes him from behind, but the anger disappears almost immediately when he sees that the person who pushed him had tripped on his shoelaces. Envy might fester for months or years; love and grief also may last for a very long time. In any event, for purposes of analysis it is assumed that the emotion ends at some definite point and the non-emotional or "calm" state returns, which here may be designated the "post-state" condition.

During the emotion state the agent chooses to act, just as he does before the state. The same set of choices presents itself to the agent as before, except of course that the change in environment that stimulates the emotion might introduce new choices. Before the stimulus, the agent has no desire to injure person P; after P insults him, he now has such a desire, and may act on it. But he may not. As noted earlier, the emotion state affects the agent by changing his preferences so that the emotion-relevant goods are more heavily weighted, and by increasing or reducing his cost of action. Sanctions and other costs thus continue to influence the agent's choice; what is different is that the costs and benefits of action differ, slightly or greatly, from what they were during the calm state.

After the emotion state ends, the agent returns to the calm state, which means that his preferences and abilities return to what they were in the pre-emotion state. But his actions during the emotion state will have changed his endowments, so he may be better or worse off than he was before the emotion state occurred.

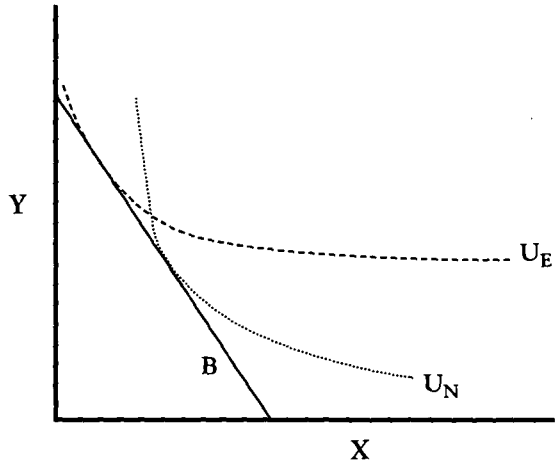
The timeline highly simplifies even the simplest emotions. One problem is that an emotional experience can be relived, not just reimagined, and so an emotion state will "tail off," and sometimes renew itself later in time. I observe a disgusting slime; I withdraw and soon forget about it; later the appearance and smell of the syrup I am pouring on my pancakes reminds me of the slime, and I am again disgusted. Similarly, my anger at an insult renews itself every time I am reminded of the insult. This complexity needs to be kept in mind.

C. *Analysis*

The agent's choice during the emotion state can be represented using the standard graphical rendering of consumer choice, as in Figure 2. The vertical axis represents the "amount" of the emotion-relevant good (Y). If the agent is angry, the axis represents the degree of injury inflicted on the person at whom the agent is angry; if the agent is disgusted, the axis represents the degree of withdrawal from the object of disgust; if the agent is in

love, it represents some measure of benefit to the beloved as experienced by the agent. The horizontal axis represents all the other goods that the agent wants to consume (X).

Figure 2



The graph depicts the agent's "normal" or calm-state indifference curve (U_N) and the corresponding emotion-state indifference curve (U_E). The emotion-state indifference curve is flatter than the calm-state indifference curve, representing the fact that in the emotion state the agent's preferences for the emotion-relevant good become more intense. The result is that the agent will give up more of the ordinary goods, than in the normal state, in return for a constant increase in his consumption of the emotion-relevant goods. The graphical rendering assumes that the budget line (B) is the same in the calm and emotion state, though as noted above it is possible that the budget lines would diverge. The emotion-state budget line might shift out or in: out, if the emotion makes action cheaper (anger); in, if the emotion makes action more costly (grief). One might assume that, say, anger makes all actions cheaper, in which case the budget line shifts out in a uniform manner. Alternatively, one might assume that the emotion makes the emotion relevant good cheaper, in which case the budget line tilts, as when it represents

a change in price.

When emotions make action cheaper, consumption of the emotion-relevant good will increase, and consumption of the other goods will either increase or decrease. When emotions make action more costly, consumption of the two kinds of good may rise or fall. And even when emotions do not change the cost of behavior, they do change preferences, so the pattern of consumption will change. As a result, the agent's emotional behavior will usually put him on a lower indifference curve measured by calm state preferences (the exception being when emotion reduces the cost of action by a sufficient amount). Call this change the emotion-provoked utility change (EPUC). A person who lashes out at an enemy while angry might be better off, with positive EPUC, after the emotion state returns, because the enemy has removed himself, or because the agent has developed a reputation for toughness; or he may be worse off, with negative EPUC, because the enemy struck back, or because the agent now finds himself in jail.

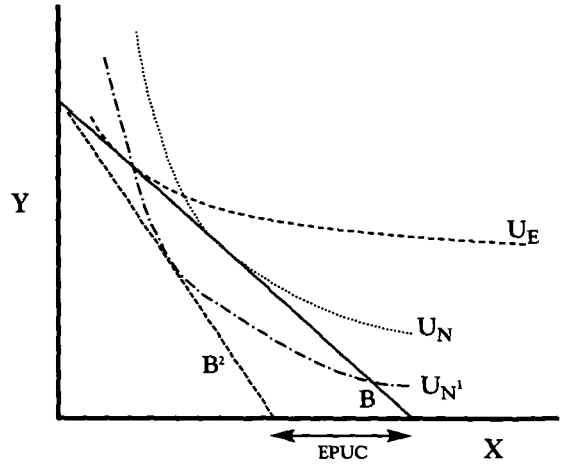
A person in the initial calm state knows that his emotional disposition might get him in trouble or benefit him. This depends on the environment. A person with an irascible disposition might do well in a shame society: people avoid abusing him because they fear him. But he might do poorly in a well-regulated society: a routine altercation might spiral into a fight, landing the agent in jail. The first person has a positive expected EPUC; the second person has a negative expected EPUC. (EPUC is defined only with reference to the emotion under consideration: the same person might be easily disgusted or not, and this might be beneficial in some contexts but not others.) The second person can be expected to "invest" to minimize his actual EPUC: by cultivating a sense of calm, or by avoiding places, like bars, where he is likely to be provoked.

It is important to emphasize that EPUC is determined by the calm-state preferences, not the emotion-state preferences, even though it is generated by actions taken during the emotion state. This is necessary in

order to capture the idea that people in their normal state are different from what they become in an emotional state, and also that, anticipating this, people will engage in certain actions in the normal state.

At the investment stage, the agent knows that he may experience the stimulus with some probability. To keep the analysis simple, let us suppose that during the emotion state, preferences change but abilities and beliefs do not. The difference between the agent's preferences during the calm state and the emotion state depend on the quality and intensity of the emotion, which is reflected by the slope of the emotion state indifference curve. As can be seen in Figure 3, the agent will typically consume a different bundle of goods during the emotion state and during the calm state, just because of the change in preferences. This means that after the emotion state has subsided and his "calm" preferences have returned, the agent will be either worse off (as in Figure 3) or better off than he had been in the calm state. If he is worse off, then we can construct a WTP measure of the difference by constructing a hypothetical budget line in the usual manner. In Figure 3, the agent would be willing to pay the amount depicted in order to avoid the consumption results of the emotion state.

Figure 3



Ex ante, the agent knows that the change in consumption wrought by the emotional response will occur with some probability, and so initial investment will reflect this expected change. Investment in the current example would be to (1) avoid the stimulus, or (2) cultivate a less sensitive disposition. Sometimes a dollar of investment will be relatively effective (switching from one bar to another) and sometimes not (developing an ability to turn the other cheek). The effectiveness of the investment in this way will be denoted by the elasticity of the emotional response with respect to the investment. A high elasticity indicates greater responsiveness. This allows us to make the following prediction:

People will invest more in cultivating dispositions or avoiding stimuli as (1) the quality and intensity of the emotion state increases relative to the calm state (that is, as EPUC increases); and (2) the elasticity of the emotion state with respect to the investment increases.

As an example, consider anger. Anger can occur in predictable and unpredictable ways. If the agent already hates a person, then he knows that if he encounters that person, there is a good chance that he will become angry. By contrast, an agent cannot predict when a stranger will offend him, and he might suppose that his anger will on average be less from a random incident involving a stranger than with someone he already knows and hates. Thus, it makes more sense to punish people who are provoked into anger by someone they hate and could avoid, than to punish people who are provoked into anger during a random encounter with a stranger. The former are in a better position during their calm state to avoid the encounter, and it is during the calm state that they are more responsive.

Suppose, instead, that an agent knows about his irascible disposition and has taken a number of steps to change it. He attends anger management classes. He avoids rowdy bars. He avoids drinking. Nonetheless, he is provoked to anger and he injures the offender. It again makes sense to reduce the sanction in order to reward and encourage his behavior during the calm state. By contrast, people who cultivate angry dispositions

should be punished.

III. Emotion in Criminal Law

It is sometimes said that a person who commits a crime under the influence of emotion is less culpable than a person who acts calmly and deliberately. The standard example is of murder being reduced to voluntary manslaughter if the defendant acted in an uncontrollable rage. But the truth is more complex. Certain emotion states reduce murder to voluntary manslaughter, but others do not. For example, under modern hate crime laws a person who kills a gay man because he "hates" gays or is "disgusted" by gays will be found more culpable than someone who kills the same man just to get his wallet. This raises the question whether the criminal law's different treatments of emotion-influenced crime can be explained on deterrence grounds.

There are two relevant considerations in a deterrence approach to emotional crimes. The first consideration is the extent to which an agent in an emotion state is responsive to sanctions. The second consideration is the extent to which an agent can be deterred from being in the emotional state in situations in which it may lead to harm.

Emotion state deterrability. A person in an emotion state may be sensitive to sanctions. Deterrability depends both on (1) the kind of the emotion and (2) the intensity. In the emotion state a person experiences a heightened preference, relative to the calm state, to "consume" the emotion-relevant good. But the person has other preferences as well. An angry person wants to strike the offender, but many angry people restrain themselves because they continue to want their freedom, their job, their assets, and the other good things they might lose if convicted of assault or murder. But even putting this aside it is important to realize that most emotions – anger is the conspicuous exception – do not create a powerful preference to harm another person. Disgust typically involves a preference to withdraw, not to attack, and that is why disgust rarely excuses assault

or murder. Fear typically involves a preference to flee or freeze, not to attack, though attacking may be a reaction in some cases, and panic may lead to harm when the agent is responsible for the well-being of an infant or incompetent person. Although a disgusted or fearful person's indifference curve will "tilt" dramatically, it does not tilt in the direction of injuring another person; indeed, that preference will become weak relative to the desire to escape the stimulus.

In addition, a person's emotion state can be more or less extreme relative to the calm state. A person can be made more or less angry by a provocation. A mere insult will, on average, anger a person less than an unprovoked slap on the face. Graphically, an angry person's indifference curve may shift out a lot or a little; if a little, then his behavior will change correspondingly. A slightly angry person will suppress the desire to lash out if the consequences are more than trivial, and may, if at all, indulge his preference by muttering or complaining about the offender to a third party.

Both these observations explain why from a deterrence perspective being in an emotion state is not a sufficient condition for reduced culpability. A person remains deterrable if, generally speaking, the emotion is not anger, or the emotion is anger but it is not intense. It makes sense to reduce the sanction for an act committed during an emotion state if (1) the emotion is anger (or another emotion that causes people to injure others, like fear, possibly) and it is quite intense, so that high expected sanctions cannot deter the behavior, and (2) sanctions are costly, which they are when they involve imprisonment. The justification is that expensive sanctions should not be wasted on people who cannot be deterred by them.

Pre-emotion (calm) state deterrability. Imagine that a person in an emotion state is undeterrable. The sanction cannot be made high enough to prevent him from acting. It does not follow that he must be excused from a crime that follows from the action tendency.

To see why, one must observe that a person in the calm state often foresees the stimuli that will provoke

the emotion state and also his actions in the emotion state. The calm state preferences might very well reflect some things (a long-term desire to stay out of jail) and not other things (an immediate desire to strike an offender) that are the reverse in the emotion state. Thus, acting on his calm state preferences the person might take precautions against entering the emotion state, including cultivating more peaceful emotions or avoiding the stimulus, though he will not if he thinks that his irascibility produces returns valued in the calm state, including a reputation for toughness. In any event, sanctions may be desirable for influencing "investment" behavior during the calm state.

Reducing the sanction for emotional behavior, relative to unemotional behavior, is justified even when the sanction does not deter emotion state behavior when (1) the calm state preferences and emotion state preferences differ only a little (EPUC is low); (2) the agent cannot avoid the stimulus or reduce the intensity of his emotional reaction at relatively low cost (elasticity is low); and (3) sanctions are relatively expensive (jail, not fines). (Note that this puts aside the incapacitation goal of imprisonment, which may justify imprisoning highly dangerous people who engage in undeterrable conduct.) The first factor essentially refers to the benefit the agent obtains by avoiding the emotion state; the second factor refers to the cost of avoiding the emotion state. Even putting aside sanctions, we expect people who very much dislike the preferences of their emotion-state selves to take steps to avoid the emotion state unless those steps are very costly. The criminal law must take account of this first stage of action.

Table 1 summarizes the argument so far.

Table 1

		emotion-state deterrability	
pre-emotion state deterrability		high	low
	high	punish	
	low		do not punish

Table 1 shows that the strongest case for reducing

criminal punishment on deterrence grounds occurs when the agent cannot be easily deterred in the emotion state and cannot easily avoid the emotion state either by avoiding the stimulus or changing his temperament. The emotion has to be the right type (anger or fear, typically) and it must be intense. When these conditions are not met, the case for reducing the punishment is weaker.

Some examples. Murder is reduced to voluntary manslaughter not just when the wrongdoer acts under the influence of emotion. The emotion usually must be anger, not (say) disgust. Anger causes people to attack others; disgust causes them to withdraw. The anger must be intense, not mild: a provocation that would excuse murder in the heat of passion does not excuse murder committed a while later. Distinctions regarding the adequacy of provocation can be understood in terms of the elasticity of investment. People who kill adulterous spouses can hardly be expected to avoid the stimulus (not get married in the first place?). But people who look for trouble in bars, especially homophobes who look for trouble in gay bars, could easily avoid provocation that leads to murderous rage. Kahan and Nussbaum want to put in the same category as murderous homophobes, women who kill brutal husbands and men who kill adulterous wives or girlfriends, so that they can argue that the law's inconsistent treatment of homophobes and these other wrongdoers contradicts the deterrence argument. But a woman who kills a drunken, brutal husband is unlikely to be a threat to the rest of society, or even to future husbands or boyfriends so long as they are not also drunken and brutal. A man whose wife or girlfriend cheated on him cannot be expected to refrain thereafter from any relationship with another woman. These people are not generally as dangerous as the person whose hatred causes him to kill homosexuals, and it is less difficult for a homophobe to avoid gay bars than for men and women to avoid having relationships with each other. Of course, those among the latter who are as dangerous – those who kill multiple husbands or wives – are punished more seriously.

Similar comments apply to the case of fear. Louise

Woodward, who was hired as a nanny, was found guilty of killing the infant in her care, but the trial judge reduced a verdict of second-degree murder to manslaughter on the ground that the evidence disclosed "confusion, fright, a bad judgment, rather than rage or malice." Supposing that Woodward really was panicking, the explanation for reducing the conviction is that sanctions do not deter people who are gripped by fear, and although most panicking people do not attack others, it is possible that a terrified caregiver might injure a child. One might argue that severe sanctions would deter fear-prone people from becoming nannies, but fear-induced killing is so rare and bizarre that the elasticity of investment with respect to fear must be considered quite low. Should the convicted killer take on a new position as nanny, however, and while panicking kill that child as well, one anticipates a very high sanction. She should have learned of her own unreliability, and avoided situations in which it could harm third parties.

Not all emotions should reduce the sanction. Hate crime laws increase, rather than, reduce sanctions, even though the racist killer more plausibly acted under the influence of emotion than, say, the contract killer. The reason that hate results in greater punishment, while anger often results in a lesser punishment, is that hate is more susceptible to pre-emotion-state manipulation than anger is. The person who hates members of a particular race can often avoid interacting with them; he can also take care not to carry weapons. The person provoked to anger by adultery is not in a similar position. The two emotions differ on the dimension of elasticity.

Turning now to the defense of duress, Kahan and Nussbaum ask us to compare (1) a woman who commits armed robbery to avoid being beaten up; (2) a woman who fails to protect her child in order to avoid being beaten up. Woman 1 has a duress defense; woman 2 does not. Kahan and Nussbaum say that this is inconsistent with the narrow consequentialist view that people who are susceptible only to extreme threats do not pose a danger to others, so punishment would be wasteful. But the law makes sense on deterrence

grounds. Sanctioning woman 1 is not likely to change behavior because a person gripped by fear develops a strong preference for self-preservation and ordinary altruistic concerns diminish. But ordinary experience suggests that altruism for one's own child remains salient even for a scared person. When we are threatened, we run away if alone but grab our children if they are with us. If this is not true for our woman 2, then a heavy sanction might offset her subjective gain, and it is no more surprising that we punish her than that we punish anyone who engages in child abuse. Kahan and Nussbaum argue a consequentialist argument assumes that legal decisionmakers "are prepared to endorse the first woman's valuation of her own welfare but not the second woman's." But this is not right. We want neither woman to commit a crime: but we punish the first woman less because a sanction is less likely to deter her.

The theory explains historical changes in the treatment of cuckolds who murder spouses discovered in flagrante, interracial murders, people who murder homosexuals who proposition them, battered women who murder husbands, and so forth. As society's evaluation of the behavior changes, it increases or reduces sanctions accordingly, in order to encourage people to invest in proper emotional dispositions and to avoid provocation otherwise, not just in the hope that the prospect of sanctions will influence the agent while in the emotion state. Anger and shame become less important and desirable sources of social order as the legal system modernizes; so over time, law will excuse less behavior motivated by anger and shame, in the hope of encouraging people to invest in the proper emotional dispositions.

A final point is that the criminal law should vary from region to region if there is cross-cultural variation in average emotional disposition. Nisbett and Cohen provide experimental evidence that in the United States southerners are more easily provoked to anger by an insult than northerners are. If, as seems likely, the elasticity of investment with respect to anger states is low, then we would expect southern states to punish crimes committed while angry and in response to

provocation, less than northern states, holding constant the cost of imprisonment. Because southerners are less likely to respond to sanctions while angry, already take more care to avoid provocation, and are unlikely to be able to modify dispositions that are mostly the result of upbringing, scarce prison resources are better devoted to deterring other crimes, than in then north.

Regret. A prominent feature of criminal sentencing is the defendant's expression of regret or refusal to express regret. If the expression is sincere, then it is highly relevant to the purposes of criminal punishment, for it reveals the distance between the defendant's calm state preferences and emotion state preferences if the crime occurred in an emotion state. If the distance is great, then the deterrence goal requires a reduction in the sentence, all else equal, because that suggests that the defendant will when calm take steps to avoid the emotion state (EPUC is high), so that criminal behavior is unlikely to recur, and a severe sanction is not necessary to deter further criminal behavior. Defendants who do not express regret for criminal behavior are dangerous because their calm state preferences are antisocial, and they should be punished either for the purpose of deterrence (if they are deterrable) or incapacitation (if they are not deterrable but are sufficiently dangerous).

A note on tort. The analysis of emotion in tort law is similar to the analysis for criminal law. Suppose that an individual must drive to work every day but is subject to, and knows himself subject to, road rage when other drivers cut him off. While under the influence of road rage, the individual drives much more carelessly than when he is calm; for example, he might drive more quickly and pay less attention. Formally, his emotion state preference to drive quickly is more intense than his calm state preference to drive quickly (or, alternatively, the cost of driving carefully increases). For concreteness, suppose that the individual's cost of driving carefully is $100 when enraged, but the cost is only $10 when the individual is calm. Further, suppose that the social cost of driving quickly is $50 in expected accident costs imposed on third parties. A negligence rule, technically

applied, would excuse the enraged driver from liability, whereas strict liability would require him to pay $50 in expected terms. Strict liability is the superior rule, for it would encourage the calm state person, who is stuck with the $50 liability imposed on him by his emotion state self, to switch to public transportation or avoid congested streets where road rage is more likely provoked. Alternatively, the individual could be held negligent for not taking public transportation when he knows himself subject to road rage, just as an epileptic is held liable for driving with knowledge of his epilepsy. The latter alternative achieves the same result as strict liability by counterfactually attributing calm state abilities and preferences to the emotion state self that causes the accident.

IV. Cost-Benefit Analysis and Risk Regulation

In a recent article Timur Kuran and Cass Sunstein argue that various cognitive biases can lead to panicked government action that is socially harmful. They focus on the availability heuristic, "a pervasive mental shortcut whereby the perceived likelihood of any given event is tied to the ease with which its occurrence can be brought to mind." Because people rely on the availability heuristic and other cognitive shortcuts, they fear risks not solely on the basis of the expected harm, but on the basis of strictly irrelevant factors such as the degree to which the risks are subject to public discussion, the harm is vivid, the technology is new, the results are irreversible, and so forth. In the meantime, dissenting views are ignored, dissenters are treated with opprobrium, and so dissent is suppressed. As a consequence, initially exaggerated beliefs about risks can feed on each other, resulting in an "availability cascade," in which a minor risk is blown up into a major threat. Kuran and Sunstein's main examples are the Love Canal scare, the Alar scare, and the response to the crash of TWA flight 800. In all these cases, a relatively trivial risk or benign explanation is overtaken by events, resulting in a panic in which the worst case is widely believed.

A notable aspect of Kuran and Sunstein's explanation

is that it is purely cognitive. People are assumed to be rational except to the extent that cognitive biases interfere with rational choice. Their argument predicts that availability cascades would occur even in a hypothetical world in which people had no emotions.

But there are some reasons for being skeptical of this view. Start with the obvious semantic point that Love Canal, and similar events, are often called "scares" or "panics." Kuran and Sunstein's account of the Love Canal affair repeatedly notes the emotional character of the events: "frightening tales spread quickly"; "residents feared..." various dangers; "[a]ngered by claims in" a newspaper, one resident organized a petition drive; a woman at a meeting "started crying hysterically"; "[h]er anxieties and fears came to be shared by the entire community"; one activist was "furious" ... "Now very emotional, I said: "You can't do that! That would be murder!"; "fears would not dissipate"; and so forth. Although Kuran and Sunstein could argue that the emotional responses were epiphenomenal, and that cognitive bias fully explains the phenomenon, an emotion-based theory cannot be discounted. Most panics, as the term suggests, are characterized by fear.

One influential psychological theory of fear holds that it is an evolutionarily adaptive mechanism for processing information about potential threats to the organism. It is evolutionarily more costly for an organism to fail to respond to a threat than it is for the organism to respond incorrectly. That is, you are less likely to survive and reproduce if you sometimes neglect to flee from a tiger than if you occasionally flee from a shadow that looks like a tiger. Certain genetically determined or learned stimuli (snakes, and so forth) are processed in a rough way by a part of the brain before being subject to cognition, a bit like the reflex action of withdrawing one's hand from a hot object. Thus, fear (and anxiety as well) has benefits and costs: it allows the organism to respond quickly to a threat, but it also appears to cause the organism to overpredict the probability of the threat. In our framework, fear results in distorted beliefs but also lower costs.

The connection between an individual's fear and a social panic occurs as follows. First, fear is contagious. A person who observes that another person is fearful is more likely to become fearful than a person who does not make such an observation. This may, of course, be rational in a sense; but it also seems to be a purely psychological or even physiological response. Second, fear feeds on itself: observing that another is fearful, one's own fear may become heightened. Third, fear, unlike some other emotions such as anger, can persist for quite a long time, sometimes in the form of a general anxiety. Fearful and anxious people continue to overestimate the probability of a threat, and to reinforce each others' incorrect beliefs.

The emotion perspective can be seen as a supplement to Kuran and Sunstein's cognitive theory, which itself indeed can be seen as a supplement to a rational choice view based on information imperfections. It is rational to infer that a threat exists if others believe that a threat exists. This inference may be strengthened by the availability heuristic, a cognitive bias. And the inference may be strengthened further by the emotion of fear, which leads the fearful individual to exaggerate (relative to calm-state beliefs) not any widely publicized risk (as suggested by the availability heuristic), but in particular those risks that pose threats that engage the fear-centered portions of the brain.

This last observation leads to the question of normative implications. Kuran and Sunstein's analysis of availability cascades lead them to call for greater insulation of decisionmakers, greater reliance on scientists and other experts, and greater use of analytic tools like cost-benefit analysis. These are surely appropriate responses when panics are the result of fear as well as cognitive biases.

But it also would be useful to know whether different panics have different explanations, and therefore justify different government responses. A bank panic, for example, is calm-state rational. Given that the bank's liabilities exceed its liquid assets, I am rational to withdraw my money if I believe others will withdraw their money.

This is a classic n-player prisoner's dilemma. Bank panics would occur even if people never made cognitive errors or experienced intense emotions. This may explain why bank panics are so easily ended: the government just needs to make a credible promise to reimburse all depositors.

By contrast, the preference for driving over flying appears to be emotion-driven. I conjecture that people are more anxious about flying than about driving because when danger provokes fear, driving does not prevent one from fleeing (one pulls over to the shoulder) but flying does (one is stuck in the tube).

A frequent criticism of aggressive airline safety regulation is that costly precautions cause people to substitute to automobiles for short trips, which in fact are more dangerous, so certain airline safety regulations may increase fatalities rather than reduce them. A common response is that people's subjective discomfort with airline travel should be counted as a social cost. Although airline safety regulation may increase aggregate fatalities as people substitute to automobiles because of cost, it may still increase social welfare as the travelers experience less emotional discomfort.

The problem with this response is that fear, dread, and anxiety are not sensitive to changes in low probabilities. A person who feels an overpowering feeling of dread while riding on an airplane will feel the same amount of dread whether the probability of an accident is 1/in 100,000 or 1 in 1,000,000. So the safety precaution does not increase that person's subjective well-being. If the person rationally anticipates his dread, he will treat it as a fixed cost regardless of the probability of accident (within constraints, obviously), so his determination whether to fly or drive will depend entirely on the pecuniary costs. This observation rescues the standard criticism of safety regulation from the economic response: subjective (emotional) discomfort should not play a critical role in safety regulation.

As another example of what is at stake, consider the problem of genetically altered food, which is widely avoided in Europe. On the rational herding view, individuals in Europe rationally avoid this food because

others avoid this food, and each person, individually rationally but collectively disastrously, infers that every person acts on statistically independent pieces of information. The reason that this story is probably false is that in the herd behavior models, the suboptimal equilibria are fragile. If genetically altered food poses risks no greater than those that people already face, and if people were rational, then the panic would not have lasted as long as it has.

There is probably some truth to the cognitive view of this panic. Concerns about genetically altered food probably stem from the mad cow disease problem in England, which was a highly salient event. But we know that emotional reactions often interfere with cognition. The argument in favor of genetic alteration of food, which is that it is not much different from breeding that has occurred for thousands of years, does not stick in people's minds, and it may be that it does not for the same reason that a person who sees a snake in a cage jumping at him "forgets," or simply does not process, the fact that the snake is behind a pane of glass, and that a person will not eat a cockroach that has been sterilized. This argument requires a jump from the primal fear and disgust responses, to a more complex, culturally mediated fear/disgust response, about which little is know. But it is a reasonable hypothesis.

The cognitive and emotion views leave a lot unexplained. If the British had all become vegetarians in response to mad cow disease, the views could have rationalized that response as well. But a similar objection can be made to the rational choice argument as well.

These methodological difficulties do not alter the fact it matters which view is correct. To see why, consider the question over whether it is appropriate for automobile manufacturers to install switches that allow consumers to deactivate air bags. Reluctance about permitting these switches stems from fears that publicity about the dangers that air bags pose to children and small adults may lead people to deactivate air bags even when doing so enhances the net danger to passengers.

The proper regulatory action depends on the

source of people's false beliefs about air bags. If the incorrect belief that air bags are on net dangerous results from rational ignorance, the proper response is simply to post labels explaining that people should activate the air bags unless a child or small adult is in the front seat. If the belief is the result of a cognitive bias like the availability heuristic, the label may be an insufficient response. Perhaps, a great deal of advertising would be necessary in order to shift people's beliefs; or, alternatively, nothing can shake people's beliefs and the best response is to make it impossible to deactivate the air bags.

If the belief is the result of fear or panic, one or more of the following responses might be appropriate. (1) Permit installation of the switch, because emotion states tend to weaken and then disappear as time passes. As people become accustomed to the presence of air bags, they will be less likely to deactivate them inappropriately. (2) Prohibit installation of the switch, because emotions are, even more than cognitive biases, impervious to reasoning. When panicked people trample each other to escape a sinking ship, no amount of reasoning will save them. (3) Permit installation, and fight emotion with emotion. When people are afraid, make them feel ashamed. When they are angry, make them feel pity. Lawyers, politicians, advertisers, and many other professionals are skilled in the tricky art of manipulating people's emotions. Sappy commercials have already been used to encourage the use of seat belts by cleverly framing seatbelt use as an obligation that people owe to their loved ones rather than as a means of protecting themselves. Similarly, sappy commercials could be used to show that air bag use is necessary to protect loved ones (unless they are small adults or children). Without expressing any opinion on whether such commercials, sappy or not, are effective, I will just note that Madison Avenue as well as the government usually run vivid, emotionally stimulating commercials, more so than dry recitations of facts.

V. Bargaining, Contract Law, and Property and Liability Rules: A Critique of Specific Performance

Much economic analysis of property rights assumes that when transaction costs are low, parties can bargain around inefficient allocations of property rights. "Transaction cost" is an ambiguous term, but it is generally limited to situations in which bargaining would involve large numbers of people, or people who do not know each other's identities. A theme of the literature is that when transaction costs are low, it is more important for courts to ensure that property rights are clear and so easily tradable, than assigned to the more efficient user, because the ability to trade ensures that the property right will end up where it is most valued.

Ward Farnsworth informally tested this view by interviewing lawyers who represented individuals involved in nuisance suits. Lawyers reported that plaintiffs who obtained judgments in nuisance cases never sold their rights to the defendants. The most plausible reason emerges from the descriptions of the cases. "They [the parties] hate each other." A lawyer's client's reaction to an offer "would have been to say 'not only "No" but "Hell, no."'" There was "too much bad blood." They "disliked each other intensely." No doubt the disputes followed the same pattern. The plaintiff was angered by the nuisance, which was considered unneighborly. The defendant was angered by the plaintiff's complaints and lawsuit. Irritation became enmity as the usual indignities of litigation ensued. By the end, anger and hatred were so intense that (in Farnsworth's view) not even mutually beneficial trade would have been possible.

These case studies conform to the common sense intuition that anger interferes with bargaining. These intuitions are consistent with theoretical and empirical work on anger. Anger typically occurs when another person offends or insults the agent, which usually means violation of a recognized norm of respect. An angry person's action tendency is to harm the offender, even at cost to

oneself. When two sides of a dispute are angry with each other, they may both do better (in subjective utility terms) by inflicting costs on each other in the form of continuing litigation, than by settling. If each party gains more by injuring the other than by being injured himself, this game is not a prisoner's dilemma: harming the other person is both the dominant strategy for both parties and the welfare-maximizing equilibrium. At the same time, a person's ex ante calm preference is to avoid fighting and to trade when there are (non-spite-related) gains from doing so. The calm state and emotion state preferences are in conflict, and if the former are to be privileged (on which, see below), then the emotion state preferences must be discounted.

These considerations suggest that the assignment and protection of property rights should be sensitive to the emotional valence of disputes. Consider the well-known defense of specific performance. If the value of performance exceeds the cost, the promisor ought to perform, and specific performance (unlike expectation damages) does not require an error-prone judicial determination of the promisee's valuation. If the value of performance is less than the cost, the promisor can bribe the promisee to release him from the contract. The advantage of the damages remedy is that it enables the promisor to breach efficiently without negotiating; but given low transaction costs this advantage has little value, and transaction costs are likely to be low when there are only two parties. Thus, specific performance is superior to damages.

The problem with this argument is that the promisor's breach may provoke the promisee's anger, and the promisee – feeling insulted – will refuse to release the promisee from the contract. This is very much in the spirit of Farnsworth's interviews. This potential refusal might not matter if the promisor tries to buy out the promisee rather than breaching first, but there are two further points of concern. First, it is hard to say whether even broaching the subject of nonperformance would not elicit an angry reaction, which would then interfere with negotiations. Second, negotiations would

in any event occur in the shadow of the promisee's angry reaction to breach.

Imagine, then, that an exogenous event causes a seller's cost to exceed the buyer's valuation. Under specific performance, if the seller breaches, she must either perform or pay the buyer's entire valuation. But if the buyer is angry, the buyer will incur a cost to spite the seller, and this means that the buyer may insist on performance even though he values it less than a proposed payment equal to the entire surplus. Anticipating this, the seller performs rather than breaches. By contrast, under expectation damages the seller would breach and pay damages equal to the buyer's valuation, with the inefficient trade avoided. Expectation damages is superior to specific performance because the plaintiff cannot prevent an efficient trade in order to spite the victim.

An important premise of this argument is that the buyer's calm state preferences matter while his anger state preferences do not matter. If the buyer's anger state preferences matter, only specific performance can protect them. Now, ex ante the buyer most likely would prefer that his anger state preferences be discounted. If that view is entitled to respect, then courts should award expectation damages; otherwise, the seller will pass the costs on to the buyer and the buyer will be forced, against his calm state preferences, to purchase the right when angry to spite the buyer! To be sure, some buyers might want this right, but this seems unusual. As long as calm state preferences are to be counted, and buyers want their calm state preferences to be counted, expectation damages is superior to specific performance when breach would lead to anger.

Notice that emotion introduces an asymmetry into the standard analysis of contract remedies. The person who breaches will not feel any anger, while the victim of the breach is likely to become angry. The reason is that the contract sets up a background norm of performance, and the person who breaks that norm injures the person who complies with it. If it is not desirable for trade to occur, which will often be the case, expectation damages

have the virtue of giving the property right to the calm person, whereas specific performance has the defect of giving the property right to the angry person. If it is desirable for trade to occur, the choice of remedy does not matter. Taking ex ante calm-state preferences as the normative baseline, specific performance reduces the value of contracts.

Further factors might bear on the choice between remedies in specific situations. Anger subsides rapidly when the agent realizes that the offensive act was unintentional or in some way justified: if you push me, I might get angry, but my anger dissolves when you explain that you tripped and grabbed at me to prevent yourself from falling, or that you were running away from a mugger. Similarly, anger – and thus specific performance – may pose fewer problems when a breach is excusable rather than willful. It is notoriously difficult to distinguish excusable from willful breaches in contract cases, but one possible approach is to distinguish breaches when the trade is ex post inefficient (the promisor's cost exceeds the buyer's valuation) and breaches when the trade is ex post efficient. The former can only be an attempt to hold up the promisee for a higher payment, and so seem willful; the latter are at least jointly value-maximizing, and so somewhat less objectionable.

It is worth lingering on the subtleties involved in imposing legal sanctions against a background regime of nonlegal sanctions. If, as Robert Frank argues, emotions evolve to enable people to make credible their threat to retaliate if another person breaks a promise, then this adaptation constrains the ability of the law to serve the same purpose. Frank argues that people restrain themselves from breaking promises and engaging in other opportunistic behavior in part because they fear retaliation. Retaliation is not always individually rational but may be compelled by emotion. Thus, emotion solves a problem of cooperation. But if emotion causes people to retaliate without carefully weighing the costs and benefits, people will retaliate even when breach is jointly maximizing and both sides would do better if the promisor compensated

the promisee but did not perform. Giving the enraged promisee the tool of specific performance enables him to exact retaliation when, given the availability of a more modest legal remedy like expectation damages, both sides would do better (as measured by calm state preferences) if retaliation did not occur.

The normative implication of this discussion is inconsistent with current law. Specific performance and harsh remedies like punitive damages should not be available when the promisor's breach is egregious and thus likely to lead to an emotional response from the promisee. Expectation damages are more appropriate. The same is true for nuisance suits: money damages is the superior remedy when the nuisance creates anger and hard feelings, assuming away the cost of determining damages. Injunctions are more suitable when emotion is unlikely to interfere with bargaining.

Conclusion

Emotions matter for legal theory because much behavior occurs under the influence of emotion. The framework I propose is a simple alteration of the standard rational choice approach, under which it is assumed that an individual's preferences, abilities, and beliefs predictably change during emotion states, and change back afterwards. This approach allows us to understand how individuals take steps to manipulate their own emotional behavior (and others' as well, though I have not emphasized this), and how the law can influence both emotional behavior and behavior that can be taken in anticipation of emotion.

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